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FILED CLERK, U.S. DISTRICT COURT
5/5/21
CENTRAL DISTRICT OF CALIFORNIA
BY: SE DEPUTY

5 *Attorney for Relator and Plaintiff*

6 **IN THE UNITED STATES DISTRICT COURT**
7
8 **FOR THE CENTRAL DISTRICT OF CALIFORNIA**

9
10 [UNDER SEAL],

CASE NO. CV 18-08311-ODW(AS)

11 Plaintiffs,

12 v.

13 [UNDER SEAL],

PART 1 OF 7
(EXHIBITS 1 – 25)

14 Defendant.

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16
17
18
19
20
21 **[FILED IN CAMERA AND UNDER SEAL**
22 **PURSUANT TO 31 U.S.C. § 3730(b)(2)]**

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Attorney for Relator and Plaintiff

**IN THE UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA**

UNITED STATES OF AMERICA *ex rel.* IONM LLC, a Delaware corporation and *ex rel.* JUSTIN CHEONGSIATMOY, M.D.; STATE OF CALIFORNIA *ex rel.* IONM LLC, a Delaware corporation and *ex rel.* JUSTIN CHEONGSIATMOY, M.D; and LOS ANGELES COUNTY *ex rel.* IONM LLC, a Delaware corporation; and *ex rel.* JUSTIN CHEONGSIATMOY, M.D., and JUSTIN CHEONGSIATMOY, M.D., in his individual capacity

Plaintiffs.

V.

**UNIVERSITY OF SOUTHERN
CALIFORNIA, a California corporation**

Defendant.

[FILED IN CAMERA AND UNDER SEAL
PURSUANT TO 31 U.S.C. § 3730(b)(2)]

PART 1 OF 7 (EXHIBITS 1-25)

CASE NO. CV 18-08311-ODW(AS)

Exhibit 1

REGULATORY, CODING, AND BILLING ISSUES FOR INTRAOPERATIVE MONITORING

Marc R. Nuwer, M.D., Ph.D.

Los Angeles, CA

AMA POLICIES FOR IOM

The diagnosis of disease and diagnostic interpretation of a study is the practice of medicine.

IOM supervision and interpretation is practice of medicine.

Non-physicians must work under physician supervision.

Physicians who supervise IOM must have training and demonstrated competence in IOM interpretation.

Only licensed persons may be paid for diagnostic interpretations.

MEDICARE POLICIES ON SUPERVISION

Intraoperative Monitoring supervision:

G0453: physician's undivided attention to a single case

95940: personal supervision

95941: continuously in OR or on-line

Not by the surgeon or anesthesiologist

Not while providing other kinds of clinical services

CURRENT PROCEDURAL TERMINOLOGY (CPT)

EEG, EPs, EMG and IOM are diagnostic tests.

Interpretation is an integral part of the service. Tests include:

- **Technical Component**: Set-up and recording, including the technologist, supplies, and equipment expenses.
- **Professional Component**: Supervision, interpretation and reporting.
- **Global**: Combined technical and professional components.

Technologists or similar others are not privileged to provide diagnostic interpretation.

DEFINITIONS IN HEALTH CARE PUBLIC POLICIES

Diagnosis: A professional opinion about presence, absence, type, location, or severity of an illness or injury in a patient.

Diagnostic Interpretation: A professional opinion about the presence, absence, type, location, or severity of an illness or injury in a patient based upon the results of a diagnostic test or procedure.

Diagnostic Test (Diagnostic Procedure): A set of steps or procedures that yield results that can be interpreted by a professional to give information about presence, absence, type, location, or severity of an illness or injury in a patient.

Q&A

May a CNIM technologist provide IOM services without a supervising physician on-line or present in the OR?

No, CMS and most carriers require continuous real-time remote or direct physician or other qualified healthcare provider supervision.

Q&A

May a physician review monitoring findings the next day and report on the monitoring after the case is complete, without direct or on-line availability during the case?

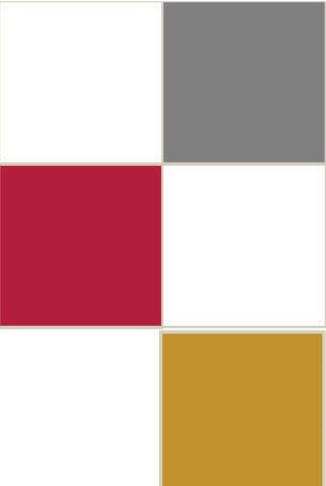
No, CMS and most carriers require continuous real-time remote or direct physician supervision to bill for IOM services.

Q&A

May a non-physician provide only the technical component of monitoring, and not have anyone provide the professional reading/supervision services?

No, interpretation by a physician is an integral part of EEG, EMG, EP and IOM procedures.

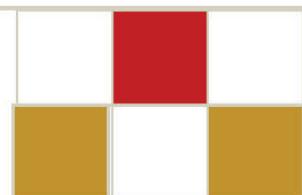
Exhibit 2

A decorative graphic on the left side of the slide consists of a 2x2 grid of colored squares. The top-left square is white, the top-right is gray, the bottom-left is red, and the bottom-right is white. To the right of this graphic, the text for the presentation is centered.

Professional Coding, Billing and Documentation Inservice

2017

Neurology - IONM



Intraoperative Neurophysiology Monitoring – IONM

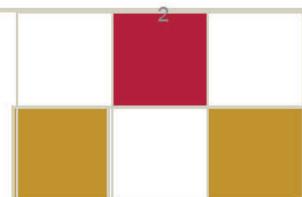
BASE (PRIMARY) CODES

- A base (primary) code is used to represent the modalities that were provided for monitoring during the procedure. Below are the codes used to describe intraoperative monitoring modalities:

All codes that can be a base code:

Use [95940](#) in conjunction with the study performed:

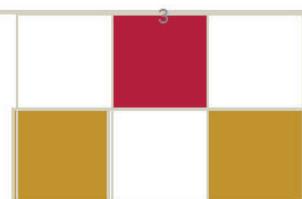
- [92585](#), [95822](#), [95860-95870](#), [95907-95913](#), [95925](#), [95926](#), [95927](#), [95928](#), [95929](#), [95930-95937](#), [95938](#), [95939](#)



Neurophysiologic Testing Modalities

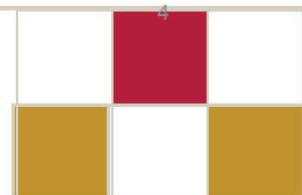
The location and type of surgery determine the chosen testing modality. The tests and codes listed may be used individually or in combination.

- Electroencephalography (EEG);
 - With direct physician supervision, use codes 95822 plus 95940 and/or 95941
 - With general physician supervision, use code 95955
- Electrocorticography (ECoG);
 - Use code 95829
- Direct cortical stimulation to localize function;
 - Use codes 95961, 95962
- Deep brain stimulation electrode placement
 - Use codes 95961, 95962
- Pallidotomy site testing;
 - Use codes 95961, 95962
- Somatosensory evoked potential (SEP) monitoring
 - Use codes 95925, 95926, 95927, or 95938 plus 95940 and/or 95941



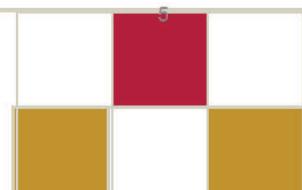
Neurophysiologic Testing Modalities

- Intraoperative SEP identification of the sensorimotor cortex
 - Use codes 95961, 95962
- Motor evoked potentials (MEP)
 - Use codes 95928, 95929, or 95939 plus 95940 and/ or 95941
- Mapping the descending corticospinal tract
 - Use codes 95928, 95929, or 95939 plus 95940 and/ or 95941
- Brainstem auditory evoked potentials
- Use code 92585 plus 95940 and/or 95941
- Peripheral nerve stimulation and recording
 - Use one code from among codes 95907-95913, plus 95940 and/or 95941



Neurophysiologic Testing Modalities

- Oculomotor, facial, trigeminal and lower cranial nerve monitoring
 - Use codes 95867, 95868 and/or 95933 plus 95940 and/or 95941
- EMG monitoring and testing of peripheral limb pathways
 - Use codes 95861, 95862 or 95870 plus 95940 and/ or 95941
- Pedicle screw stimulation
 - Use codes 95861, 95862 or 95870 plus 95940 and/ or 95941
- Selective dorsal rhizotomy rootlet testing;
 - Use codes 95861, 95862 or 95870 plus 95940 and/ or 95941
- Transcranial electrical MEPs (tceMEPs) for external anal and urethral sphincter muscles monitoring.
 - Use code 95870 plus 95940 and/or 95941



Intraoperative Neurophysiology Monitoring – IONM

- **IONM** is a technique that is directly aimed at reducing the risk of neurological deficits after operations that involve the nervous system.
- “Add-on” service are billed in addition to the base code for the procedure methodology
 - **+95940** Continuous intraoperative neurophysiology monitoring in the operating room, one on one monitoring requiring personal attendance, each 15 minutes (List separately in addition to code for primary procedures); and
 - **+95941** Continuous intraoperative neurophysiology monitoring, from outside the operating room (remote or nearby) or for monitoring of more than one case while in the operating room, per hour.
- **MEDIACRE: G0453** Continuous intraoperative neurophysiology monitoring, from outside the operating room (remote or nearby), per patient, (attention directed exclusively to one patient) each 15 minutes (list in addition to primary procedure) for monitoring occurring outside the operating room.

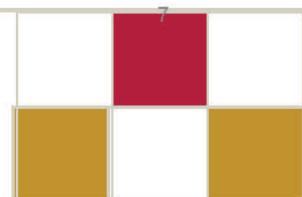
ADD-ON CPT® CODES FOR PROFESSIONAL OVERSIGHT

Professional oversight of IOM may be provided in two different ways:

- Monitoring oversight remotely from outside the O.R. (95941, G0453)
- Monitoring oversight within the O.R. (95940)

ADD-ON CPT CODES 95941 AND 95940:

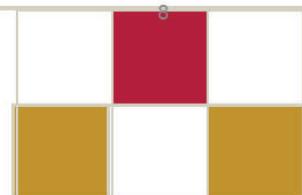
- **95941:** • **Professional Oversight from outside the O.R.** (remote) or monitoring of more than one case while in the O.R., per hour.
 - Billed in whole units and should be rounded up to the next unit if at least 31 minutes of service is provided.
- **95940:** • **Professional Oversight from within the O.R.**, one-on-one monitoring, per 15 minutes, even if multiple nerve studies are performed.
 - Billed in whole units and should be rounded to the next unit if at least 8 minutes of service is provided.
 - Each base (primary) code should be applied once per operative session.
 - Time spent after the procedure performing or interpreting neurophysiologic studies should not be counted as IOM, but reported as a separate procedure.
 - The monitoring professional must be monitoring in real-time and be solely dedicated to performing the monitoring.
 - The monitoring professional must have the capacity for continuous or immediate contact with the operating room at all times.



MEDICARE HCPCS CODE G0453

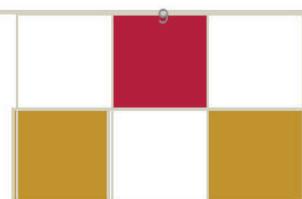
IOM from outside the O.R. (remote), monitoring professional can only bill for exclusive time spent monitoring one Medicare patient, per 15 minutes.

- HCPCS code G0453 is billed in whole units and should be rounded up to the next unit if at least 8 minutes of service is provided, not to exceed 4 units per hr.
- Multiple cases may be monitored simultaneously, but the monitoring professional can only bill one case at a time.
- Monitoring professionals may use the method of their choice to allocate time to patients being simultaneously monitored, but only one unit of service can be billed for one patient for a 15-minute time period.
- The monitoring professional may add up non-continuous time directed at one patient to determine how many units may be billed.
- Monitoring professionals must account for the exclusive, non-continuous time spent monitoring Medicare patients when billing Medicare.



Time For 95940

- Code [95940](#) is reported per 15 minutes of service.
- Code [95940](#) requires reporting only the portion of time the monitoring professional was physically present in the operating room providing one-on-one patient monitoring, and no other cases may be monitored at the same time.
- Time spent in the operating room is cumulative. To determine units of service of [95940](#), use the total minutes monitoring in the operating room one-on-one.
- Monitoring may begin prior to incision (eg, when positioning on the table is a time of risk). Report continuous intraoperative neurophysiologic monitoring in the operating room ([95940](#)) in addition to the services related to monitoring from outside the operating room ([95941](#)).

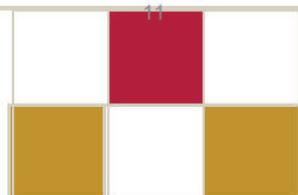


95941

- Report 95941 for all cases in which there was no physical presence by the monitoring professional in the operating room during the monitoring time or when monitoring more than one case in an operating room.
- It is also used to report the time of monitoring physically performed outside of the operating room in those cases where monitoring occurred both within and outside the operating room.
- Do not report 95941 if the monitoring lasts 30 minutes or less.

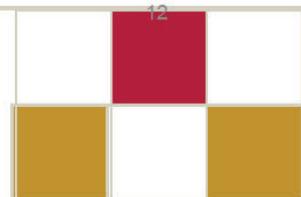
95941

- Report 95941 for all cases in which there was no physical presence by the monitoring professional in the operating room during the monitoring time or when monitoring more than one case in an operating room.
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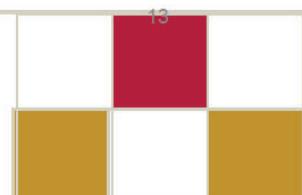
Time For 95941

- Intraoperative neurophysiology monitoring codes [95940](#) and [95941](#) are each used to report the total duration of respective time spent providing each service, even if that time is not in a single continuous block.



DOCUMENTATION OF MONITORING

- In order for neurophysiologic monitoring to be a reimbursable event, the medical need for monitoring is documented by a written order in the patient's chart. Additional documentation may also be included in the monitoring report.
- The following information may be considered for inclusion in the monitoring report:
 - Description of the modalities monitored
 - Clinical information illustrating how the monitoring assisted with the surgical procedure
 - Duration of monitoring
 - Location of the interpreting professional during monitoring (e.g., on site or remote)
- **MODIFIER DESCRIPTION**
- -26 **Professional Component:** used to reflect the professional's interpretation of the diagnostic test.



Intraoperative Neurophysiology Monitoring

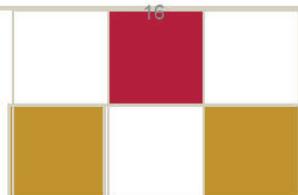
- AMA - CPT® does not limit the codes to any particular specialty. However, CPT® introductory language and AMA coding guidance is clear that in order to bill these codes (+95940, +95941, or G0453) the service must be performed by a monitoring professional who is **SOLELY DEDICATED** to performing the intraoperative neurophysiologic monitoring and is available to intervene at all times during the service as necessary.
- The monitoring professional may not provide any other clinical activities during the same period of time. In the event the monitoring is performed by the surgeon or anesthesiologist, the professional services are **INCLUDED** in the primary service code(s) and **SHOULD NOT BE REPORTED SEPARATELY**. In addition, these codes should not be reported for automated monitoring devices that do not require continuous attendance by a professional qualified to interpret the testing and monitoring.

CPT Guidelines

- Throughout the monitoring, there must be provisions for continuous and immediate communication directly with the operating room team in the surgical suite.
- One or more simultaneous cases may be reported ([95941](#)).
- When monitoring more than one procedure, there must be the immediate ability to transfer patient monitoring to another monitoring professional during the surgical procedure should that
- Report [95941](#) for all remote or non-one-on-one monitoring time connected to each case regardless of overlap with other cases.

CPT Guidelines

- Throughout the monitoring, there must be provisions for continuous and immediate communication directly with the operating room team in the surgical suite.
- One or more simultaneous cases may be reported ([95941](#)).
- When monitoring more than one procedure, there must be the immediate ability to transfer patient monitoring to another monitoring professional during the surgical procedure should that
- Report [95941](#) for all remote or non-one-on-one monitoring time connected to each case regardless of overlap with other cases.

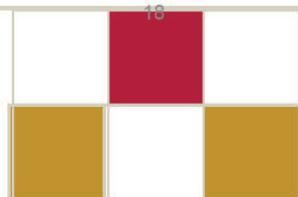


CPT Guidelines

- Codes [95940](#), [95941](#) include only the ongoing neurophysiologic monitoring time distinct from performance of specific type(s) of baseline neurophysiologic study(s), or other services such as intraoperative functional cortical or subcortical mapping.
- Codes [95940](#) and [95941](#) are reported based upon the time spent monitoring only, and not the number of baseline tests performed or parameters monitored.
- The time spent performing or interpreting the baseline neurophysiologic study(ies) should not be counted as intraoperative monitoring, but represents separately reportable procedures.
- When reporting [95940](#) and [95941](#), the same neurophysiologic study(ies) performed at baseline should be reported not more than once per operative session.
- Baseline study reporting is based upon the total unique studies performed.
 - For example, if during the course of baseline testing and one-on-one monitoring, two separate nerves have motor testing performed in conjunction with limited single extremity EMG, then [95885](#) and [95907](#) would be reported in addition to [95940](#).
 - Time spent monitoring ([95940](#), [95941](#)) excludes time to set up, record, and interpret the baseline studies, and to remove electrodes at the end of the procedure.

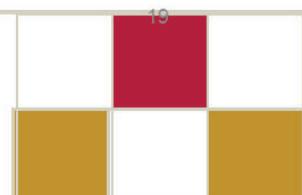
Standby and Services That Extend Past Midnight

- To report time spent waiting on standby for a case to start, use [99360](#).
- For procedures that last beyond midnight, report services using the day on which the monitoring began and using the total time monitored.



99360

- When standby care is requested, both the requesting physician and providing physician must document the need for standby care regardless of whether a claim for reimbursement is submitted
- If you submit a claim, be sure to follow the CPT guidelines for 99360, which include:-
 - Another physician must document in writing the request for the standby service.
 - The standby physician must not provide care to other patients during the standby period.
 - The standby physician should not submit 99360 for any service of less than 30 minutes total on that date of service.
 - You may report an additional unit of 99360 for each additional 30 minutes, meaning another full 30 minutes of standby service.
 - If the physician is called upon during the procedure to place epicardial leads, you should report the code for the service provided rather than reporting 99360



99360

- Q: My doctors stand by for the cardiologists during a pacemaker placement in case they need to place epicardial leads. They want to report their time, and I have found 99360 for this. Do they need to dictate something in order for me to charge for this?
 - Answer: CMS and many other payers do not pay for 99360 (Physician standby service, requiring prolonged physician attendance [face-to face] without direct patient contact, each 30 minutes [example., operative standby, standby for frozen section, for cesarean/high risk delivery, for monitoring EEG]), so that the doctor may not be able to charge for standby time.
- If a third party payer does reimburse for 99360, then see to it that the doctor has documented the standby service with something like: I was requested by [DOCTOR'S NAME] to be on standby for the pacemaker implant performed on [PATIENT'S NAME] on [DATE]. I reached the operating room at [ARRIVAL TIME] and departed at [DEPARTURE TIME].
- Remember: When standby care is requested, both the requesting physician and providing physician must document the need for standby care irrespective of whether a claim for reimbursement is submitted.

99360

- Remember: When standby care is requested, both the requesting physician and providing physician must document the need for standby care irrespective of whether a claim for reimbursement is submitted.
- If you submit a claim, see to it that you follow the CPT guidelines for 99360, which include:
 - One more doctor must document in writing the request for the standby service.
 - The standby doctor must not provide care to other patients during the standby period.
 - The standby doctor shouldn't submit 99360 for any service of less than 30 minutes total on that DOS. You may report an additional unit of 99360 for each additional 30 minutes, which means another full 30 minutes of standby service.

Tip: If the doctor is called upon during the procedure to place epicardial leads, you should report the code for the service provided rather than reporting 99360.

Section Specific Guideline

- The EEG, autonomic function, evoked potential, reflex tests, EMG, NCV, and MEG services ([95812-95829](#) and [95860-95967](#)) include recording, interpretation, and report by a physician or other qualified health care professional.
- For interpretation only, use modifier 26. For EMG guidance, see [95873](#), [95874](#).

Codes [95812-95822](#), [95950-95953](#) and [95956](#) use recording time as a basis for code use.

- Recording time is when the recording is underway and data is being collected. Recording time excludes set up and take down time. Codes [95961-95962](#) use physician or other qualified health care professional attendance time as a basis for code use.

(Do not report codes [95860-95875](#) in addition to [96000-96004](#))

Neurology Diagnostics EEG Leads

- **Q:** What is the minimum number of channels or electrodes to be used in order to report codes 95812, 95813, 95955 and 95822?
- **A:** One has to meet the minimum technical standards for an EEG test, not only with a minimum of 20 minutes of monitoring, but with a minimum of eight channels and other rules

Coding Tips

- Use 95940 & 95941 in conjunction with the study performed, 92585, 95822, 95860-95870, 95907-95913, 95925-95939)
- For time spent waiting on standby before monitoring, use 99360
- For electrocorticography, use 95829
- For intraoperative EEG during nonintracranial surgery, use 95955
- For intraoperative functional cortical or subcortical mapping, see 95961- 95962
- For intraoperative neurostimulator programming and analysis, see 95970- 95979)

CMS 8 Minute Time and for 15 Minute Units

8 Minute Rule Chart

Below is the 8 Minute Rule chart to help you determine the total number of minutes service was provided and the total number of units you can bill for.

Units	Number of Minutes
0 Units	< 8 Minutes
1 Unit	≥ 8 Minutes and ≤ 22 minutes
2 Units	≥ 23 Minutes and ≤ 37 minutes
3 Units	≥ 38 Minutes and ≤ 52 minutes
4 Units	≥ 53 Minutes and ≤ 67 minutes
5 Units	≥ 68 Minutes and ≤ 82 minutes
6 Units	≥ 83 Minutes and ≤ 97 minutes
7 Units	≥ 98 Minutes and ≤ 112 minutes
8 Units	≥ 113 Minutes and ≤ 127 minutes

Documentation in Medical Record

- Include in each record the total number of minutes dedicated to each patient for each type of IONM provided.
- For Medicare include the specific number of minutes provided to a single beneficiary for remote monitoring. If more than one beneficiary is being monitored simultaneously, the total number of beneficiary minutes cannot exceed the total minutes of simultaneous monitoring time.
- List specifically the base service provided.
- List any patient specific diagnosis, signs and symptoms
- Procedure and results

Available Resources at USC

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USC Compliance Help & Hotline 213-740-2500

Or www.mycompliancereport.com, and enter access code: **UOSC**

Reference cards for E/M Coding are available from USC Compliance



Keck Medicine
of USC

Exhibit 3



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Part II

Department of Health and Human Services

Centers for Medicare & Medicaid Services

42 CFR Parts 405, 410, 411, et al.

Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule, Clinical Laboratory Fee Schedule & Other Revisions to Part B for CY 2014; Final Rule

suggested values overstate the work involved in these procedures.

We believe that the work for CPT code 95886 is similar to the work performed when five or more muscles are examined in one extremity, as described by CPT code 95860, which has a work RVU of 0.96. However, CPT code 95886 is an add-on code to nerve conduction studies. Therefore, as we have previously valued services that overlap with another CPT code, we applied a 10% reduction to the work RVU of CPT code 95860 to determine a work RVU of 0.86 for CPT code 95886. Similarly, in our valuation of CPT code 95887, we believe that the work for the code is similar to the work performed when cranial nerve supplied muscles are examined, as described by CPT code 95867, which has a work RVU of 0.79. However, CPT code 95887 is an add-on code to nerve conduction studies. Therefore, as we have previously valued services that overlap with another code, we applied a 10 percent reduction to the work RVU of CPT code 95867 to determine a work RVU of 0.79 for CPT code 95887. For CY 2014, we are finalizing a work RVU of 0.86 for CPT code 95886 and 0.71 for CPT code 95887.

(37) Neurology and Neuromuscular Procedures: Electromyography and Nerve Conduction Tests (CPT Codes 95908, 95909, 95910, 95911, 95912, and 95913)

In our CY 2013 review, we did not accept the AMA RUC-recommended values for CPT codes 95908, 95909, 95910, 95911, 95912, and 95913. For those codes, we found that the progression of the survey's 25th percentile work RVUs and survey's median times appropriately reflected the relativity of the services and valued the codes accordingly. CPT code 95908 was an exception to this, as we believed the survey's 25th percentile work RVU was too low relative to other fee schedule services. Therefore, we assigned the following work RVUs for CY 2013: 1.00 to CPT code 95907, 1.25 to CPT code 95908, 1.50 to CPT code 95909, 2.00 to CPT code 95910, 2.50 to CPT code 95911, 3.00 to CPT code 95912, and 3.56 to CPT code 95913.

Additionally, we refined the AMA RUC-recommended intraservice time for CPT code 95908 from 25 minutes to the survey's median time of 22 minutes and for CPT code 95909 from 35 minutes to the survey's median time of 30 minutes, so that all the CPT codes in the series were valued using the survey's median intraservice time.

Comment: Commenters disagreed with our valuation of CPT codes 95908,

95909, 95910, 95911, 95912, and 95913. Commenters opposed the interim final values for the codes because they believed the intensity and complexity of the procedures increased as more nerve conductions were performed and as a result, believed that the valuations should be higher. Additionally, commenters believe that because no significant changes in the efficiencies of the test had occurred, in terms of time and cost related to performance, that our changes in the valuations were unjustified. Therefore, commenters requested that we accept the AMA RUC recommended work RVUs for all of these codes and requested refinement panel review. Lastly, commenters also suggested that if the interim final values were to be finalized, that their implementation be staggered to limit the adverse impacts that the values would have on health care access.

Response: After reviewing the request for refinement, we agreed that CPT codes 95908, 95909, 95910, 95911, 95912, and 95913 met the requirements for refinement and referred the codes to the CY 2013 multi-specialty refinement panel for further review. The refinement panel median work RVUs were: 1.37 for CPT code 95908, 1.77 for CPT code 95909, 2.80 for CPT code 95910, 3.34 for CPT code 95911, 4.00 for CPT code 95912, and 4.20 for CPT code 95913. Following the refinement panel meeting, we again reviewed the work involved in these codes and continue to believe that the progression of the survey's 25th percentile work RVUs and survey median times for these codes appropriately reflect the relativity of these codes. CPT code 95908 was an exception to this approach because we believe that the survey's 25th percentile work RVU is too low relative to other fee schedule services. We also note that we do not believe that the results of the survey support the notion that the intensity and complexity of the procedures increases as more nerve conductions are performed. Instead, we believe that the incremental differences reflected in the survey correspond with the incremental differences in our CY 2013 interim final values. Therefore, we are finalizing the CY 2013 interim final work RVUs and time refinements for CPT codes 95908, 95909, 95910, 95911, 95912, and 95913 for CY 2014. With regard to the comment that our rates would impede access to these critical services, we are unaware of data that shows that access has declined.

(38) Evoked Potentials (CPT Codes 95928 and 95929)

As detailed in the CY 2013 final rule with comment period, CPT codes 95928

and 95929 were each assigned a CY 2013 interim final work RVU of 1.50. Subsequently, the AMA RUC recommended intraservice time for these codes based on only 19 of the 28 survey responses. As a result, the AMA RUC recommendations included an intraservice time of 40 minutes with which we do not agree. When based on all 28 survey responses, the intraservice time is 33 minutes. We agree with the AMA RUC recommended preservice and postservice times because they are consistent across all 28 survey responses. Therefore, for CY 2014, we are refining the preservice time, intraservice and postservice times for CPT codes 95928 and 95929 to 15 minutes, 33 minutes and 10 minutes, respectively. We are assigning CY 2014 interim final work RVUs of 1.50 to CPT codes 95928 and 95929, based upon the AMA RUC recommendations, and are seeking public input on the time of the codes.

(39) Neurology and Neuromuscular Procedures: Intraoperative Neurophysiology (CPT Codes 95940 and 95941 and HCPCS Code G0453)

Effective January 1, 2013, the CPT Editorial Panel deleted CPT code 95920 and replaced it with CPT codes 95940 for continuous intraoperative neurophysiology monitoring in the operating room requiring personal attendance and 95941 for continuous intraoperative neurophysiology monitoring from outside the operating room (remote or nearby). Prior to CY 2013, the Medicare PFS paid for remote monitoring billed under CPT code 95920, which was used for both in-person and remote monitoring. For CY 2013, we created HCPCS code G0453 to be used for Medicare purposes instead of CPT code 95941. Unlike CPT code 95941, HCPCS code G0453 can be billed only for undivided attention by the monitoring physician to a single beneficiary, not for the monitoring of multiple beneficiaries simultaneously. Since G0453 was used for remote monitoring of Medicare beneficiaries, CPT code 95941 was assigned a PFS procedure status indicator of I (Not valid for Medicare purposes. Medicare uses another code for the reporting of and the payment for these services.

As detailed in the CY 2013 final rule with comment period, after reviewing CPT code 95940, we agreed with the AMA RUC that a work RVU of 0.60 accurately accounted for the work involved in furnishing the procedure. Also, we agreed with the AMA RUC that a work RVU of 2.00 accurately accounted for the work involved in furnishing 60 minutes of continuous

74306 Federal Register / Vol. 78, No. 237 / Tuesday, December 10, 2013 / Rules and Regulations

intraoperative neurophysiology monitoring from outside the operating room. Accordingly, we assigned a work RVU of 0.50 to HCPCS code G0453, which described 15 minutes of monitoring from outside the operating room, on an interim final basis for CY 2013.

Comment: Commenters disagreed with our valuation of CPT codes 95940, 95941 and G0453. Commenters opposed the one-on-one patient to physician model that our recommendations proposed. Commenters stated the following: G0453 was contradictory to current provider models; the accessibility of IONM services would be lowered; surgeons would be deprived of advantageous services; qualified level of professional supervision would be reduced; hospitals would suffer increased overhead costs; and G0453 inappropriately assessed the services. Therefore, commenters requested we withdraw HCPCS code G0453 and validate CPT codes 95940 and 95941 together, through acceptance of the AMA RUC-recommended work RVUs of 0.60 for CPT code 95940 and 2.00 for CPT code 95941.

Another commenter suggested we value CPT code 95941 at 0.5 of CPT 95940 although a rationale for that valuation was not provided. Several other commenters requested we increase the work value of G0453 so that it was equal to the work RVU assigned to CPT code 95940 because they believed the physician time and effort for both services was the same. The majority of commenters suggested we value the concurrent monitoring of up to 4 patients by a neurologist with the creation of additional G codes for the remote monitoring of 2, 3 or 4 patients.

Response: Based on comments received, we re-reviewed CPT codes 95940, 95941 and HCPCS code G0453 and agree that based on the comparable nature of the work between CPT code 95940 and HCPCS code G0453, that G0453 should be valued equally to CPT code 95940.

Therefore, we are finalizing a work RVU of 0.60 to CPT code 95940 and 0.60 to HCPCS code G0453 for CY 2014. We are also finalizing a PFS procedure status indicator of I (Not valid for Medicare purposes. Medicare uses another code for the reporting of and the payment for these services) to CPT code 95941 for CY 2014, because for Medicare purposes, HCPCS code G0453 will continue to be used instead of CPT code 95941. Although we considered commenters' suggestions to value concurrent monitoring of up to 3 or 4 patients by a neurologist with the creation of additional G-codes for the

remote monitoring of 2, 3 or 4 patients, creation of these G codes would allow billing for more than 60 minutes of work during a 60 minute time period. We continue to believe that HCPCS code G0453 adequately accounts for the relative resources involved when the physician monitors a Medicare beneficiary, while it precludes inaccurate payment in cases where multiple patients are being monitored simultaneously. Therefore, we will maintain the current code descriptor for HCPCS code G0453.

Comment: Some commenters suggested we create mechanisms for practitioners to report the professional and technical components separately for CPT codes 95940 and HCPCS code G0453. One of these commenters suggested that creating separate technical component payment for the PFS would allow hospitals to approximate the relative resource costs associated with the technical component of the service.

Response: It is our understanding that these services are nearly always furnished to beneficiaries in facility settings. Therefore, Medicare would not make payments through the PFS that account for the clinical labor, disposable supplies, or medical equipment involved in furnishing the service. Instead, these resource costs would be included in the payment Medicare makes to the facility through other payment mechanisms. Therefore, we do not believe it would be appropriate to create separate payment rates for the professional and technical component of these services.

(40) Neurology System: Autonomic Function Tests (CPT Code 95943)

As detailed in the CY 2013 final rule with comment period, we assigned a PFS procedure status of C to CPT code 95943, pursuant to the AMA RUC recommendation. (Contractors price the code. Contractors establish RVUs and payment amounts for these services.) The AMA RUC believes that a PFS procedure status of "C" was appropriate because they did not have sufficient information for making a specific work RVU recommendation.

Comment: Commenters opposed contractor pricing of CPT code 95943 because the other autonomic nervous system testing codes have national work RVUs and payment rates. Commenters suggested we crosswalk CPT code 95943 to CPT code 95924 due to the procedures' similarity in total work.

Response: We continue to believe that a PFS procedure status of C (Contractors price the code. Contractors establish RVUs and payment amounts for these

services.) is appropriate for CPT code 95943. We do not believe that the commenters provided sufficient data to value the service. Therefore, we are finalizing a Contractor Pricing procedure status to CPT code 95943 for CY 2014.

(41) Inpatient Neonatal Intensive Care Services and Pediatric and Neonatal Critical Care Services: Pediatric Critical Care Patient Transport (CPT Codes 99485 and 99486)

For CY 2013, the CPT editorial panel created CPT codes 99485 and 99486, to describe the non-face-to-face services provided by physician to supervise interfacility care of critically ill or critically injured pediatric patients.

As detailed in the CY 2013 final rule with comment period, we reviewed CPT codes 99485 and 99486 and believed the services should be bundled into other services and not be separately payable. We believed the services were similar to CPT code 99288, which is also bundled on the PFS. The AMA RUC recommended a work RVU of 1.50 for CPT code 99485 and a work RVU of 1.30 for CPT code 99486. On an interim final basis for CY 2013, we assigned CPT codes 99485 and 99486 a PFS procedure status indicator of B (Payments for covered services are always bundled into payment for other services, which are not specified. If RVUs are shown, they are not used for Medicare payment. If these services are covered, payment for them is subsumed by the payment for the services to which they are bundled).

Comment: Commenters disagreed with our assignment of CPT codes 99485 and 99486 as bundled codes. They stated that that classification puts pediatric physicians at a disadvantage since the majority of non-Medicare payers will commonly bundle the codes as well. Commenters strongly recommended that we adopt status indicator A (Active) or, at the very least, status indicator N (Noncovered Service) for CPT codes 99485 and 99486.

Response: We continue to believe that CPT codes 99485 and 99486 are similar to CPT code 99288 and, like CPT code 99288, involve work that is already considered in the valuation of other services. Therefore, we do not believe that these services should be separately payable. Therefore, we are finalizing a PFS procedure status of B (Payments for covered services are always bundled into payment for other services, which are not specified. If RVUs are shown, they are not used for Medicare payment. If these services are covered, payment for them is subsumed by the payment for the services to which they are

Exhibit 4

Local Coverage Determination (LCD): Nerve Conduction Studies and Electromyography (L36524)

Links in PDF documents are not guaranteed to work. To follow a web link, please use the MCD Website.

Contractor Information

CONTRACTOR NAME	CONTRACT TYPE	CONTRACT NUMBER	JURISDICTION	STATE(S)
Noridian Healthcare Solutions, LLC	A and B MAC	01111 - MAC A	J - E	California - Entire State
Noridian Healthcare Solutions, LLC	A and B MAC	01112 - MAC B	J - E	California - Northern
Noridian Healthcare Solutions, LLC	A and B MAC	01182 - MAC B	J - E	California - Southern
Noridian Healthcare Solutions, LLC	A and B MAC	01211 - MAC A	J - E	American Samoa Guam Hawaii Northern Mariana Islands
Noridian Healthcare Solutions, LLC	A and B MAC	01212 - MAC B	J - E	American Samoa Guam Hawaii Northern Mariana Islands
Noridian Healthcare Solutions, LLC	A and B MAC	01311 - MAC A	J - E	Nevada
Noridian Healthcare Solutions, LLC	A and B MAC	01312 - MAC B	J - E	Nevada
Noridian Healthcare Solutions, LLC	A and B MAC	01911 - MAC A	J - E	American Samoa California - Entire State Guam Hawaii Nevada Northern Mariana Islands

LCD Information

Document Information

LCD ID

Original Effective Date

L36524

For services performed on or after 06/01/2016

LCD Title

Nerve Conduction Studies and Electromyography

Revision Effective Date

For services performed on or after 12/01/2019

Proposed LCD in Comment Period

N/A

Revision Ending Date

N/A

Source Proposed LCD

N/A

Retirement Date

N/A

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Notice Period Start Date

04/14/2016

Notice Period End Date

05/31/2016

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CMS National Coverage Policy

Code of Federal Regulations:

42 CFR Section 410.32 indicates that diagnostic tests may only be ordered by the treating physician (or other treating practitioner acting within the scope of his or her license and Medicare requirements) who uses the results in the management of the beneficiary's specific medical problem.

Federal Register:

Federal Register Vol. 62, 59047, Supervision of Diagnostic Tests, describes the degree of physician supervision required for diagnostic tests.

CMS Publications:

CMS Publication 100-03, *Medicare National Coverage Determinations (NCD) Manual*, Chapter 1, Part 2:160.23

Sensory Nerve Conduction Threshold Tests (sNCTs)

Program Memorandum Carriers Transmittal B-01-28 Change Request 850, describes tests that may be performed by PTs with ABPTS certification

CMS Publication 100-2. *Medicare Benefit Policy Manual*, Chapter 15, Section 80: Requirements for Diagnostic Tests.

Transmittal 2663 Change Request 8169 April Update to the CY 2013 Medicare Physician Fee Schedule Database (MPFSDB)

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

Noridian expects healthcare professionals who perform electrodiagnostic (ED) testing will be appropriately trained and/or credentialed, either by a formal residency/fellowship program, certification by a nationally recognized organization, or by an accredited post-graduate training course covering anatomy, neurophysiology and forms of electrodiagnostics (including both NCS and EMG) acceptable to this Contractor, in order to provide the proper testing and assessment of the patient's condition, and appropriate safety measures. It would be highly unlikely that this training and/or credentialing is possessed by providers other than Neurologists, or Physical Medicine & Rehabilitation physicians.

The electrodiagnostic evaluation is an extension of the neurologic portion of the physical examination. Both require a detailed knowledge of a patient and his/her disease. Training in the performance of electrodiagnostic procedures in isolation of knowledge about clinical diagnostic and management aspects of neuromuscular diseases, may not be adequate for proper performance of an electrodiagnostic evaluation and correct interpretation of electrodiagnostic test results. Without awareness of the patterns of abnormality expected in different diseases and knowledge that the results of nerve conduction studies (NCS) and electromyography (EMG) may be similar in different diseases, diagnosis solely by EMG-NCS findings may be both inadequate and ultimately detrimental to the patient.

Guidelines about proper qualifications for qualified health care professionals performing electrodiagnostic evaluations have been developed and published by American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM) and other medical organizations, including the AMA, the American Academy of Neurology, the American Academy of Physical Medicine and Rehabilitation, American Neurological Association, the American Board of Physical Therapy Specialties (ABPTS) in Clinical Electrophysiology, and the Department of Veterans Affairs.

Both EMG and NCS are usually required for a clinical diagnosis of peripheral nervous system disorders. Performance of one type of testing does not eliminate the need for the other. The intensity and extent of testing with EMG and NCS are matters of clinical judgment developed after the initial pre-test evaluation, and later modified during the testing procedure.

Decisions to continue, modify or conclude a testing rely on knowledge of anatomy, physiology and neuromuscular diseases. Ongoing real-time assessment of data is required during the clinical diagnostic evaluation and especially during EMG examination.

Nerve conduction studies (NCS) are used to measure action potentials resulting from peripheral nerve stimulation which are recordable over the nerve or from an innervated muscle. With this technique, responses are measured between two sites of stimulation, or between a stimulus and a recording site.

NCS are of two general types: sensory and motor. Either surface or needle electrodes can be used to stimulate the nerve or record the response. Axonal damage or dysfunction generally results in loss of nerve or muscle potential response amplitude; whereas demyelination leads to prolongation of conduction time and slowing of conduction velocity.

Obtaining and interpreting NCS results requires extensive interaction between the performing qualified health care professional and patient, and is most effective when both obtaining raw data and interpretation are performed concurrently on a real-time basis.

Results of the NCS reflect on the integrity and function of:

- (I) the myelin sheath (Schwann cell derived insulation covering an axon), and
- (II) the axon (an extension of neuronal cell body) of a nerve.

Interruption of axon and dysfunction of myelin will both affect NCS results.

It is often also valuable to test conduction status in proximal segments of peripheral nerves. This assessment can be accomplished by H-reflex, F-wave and blink reflex testing. These proximal segments include the first several centimeters of a compound nerve emerging from the spinal cord or brainstem. H-reflex, F-waves and Blink reflex testing accomplish this task better than distal NCS.

Electromyography (EMG) is the study and recording of intrinsic electrical properties of skeletal muscles. This is carried out with a needle electrode. Generally, the needles are of two types: monopolar or concentric. EMG is undertaken together with NCS. Unlike NCS however, EMG testing relies on both auditory and visual feedback to the electromyographer. This testing is also invasive in that it requires needle electrode insertion and adjustment at multiple sites, and at times anatomically critical sites. As in NCS, during EMG studies the electromyographer depends on ongoing real-time interpretation of clinical diagnoses being evaluated to decide whether to continue, modify, or conclude a test. This process requires knowledge of anatomy, physiology, and neuromuscular diseases.

EMG results reflect not only on the integrity of the functioning connection between a nerve and its innervated muscle but also on the integrity of a muscle itself. The axon innervating a muscle is primarily responsible for the muscle's volitional contraction, survival, and trophic functions. Thus, interruption of the axon will alter the EMG. A few prime examples of conditions in which EMG is potentially helpful are disc disease producing spinal nerve dysfunction, advanced nerve compression in peripheral lesions, Amyotrophic Lateral Sclerosis (ALS), polyneuropathy, etc. After an acute neurogenic lesion, EMG changes may not appear for several days to weeks in the innervated muscles. Primary muscle disease such as polymyositis will also alter a normal EMG pattern. Myotonic disorders may show a pattern of spontaneous repetitive discharges on needle exploration.

In summary, axonal and muscle involvement are most sensitively detected by EMG, and myelin and axonal involvement are best detected by NCS.

A. Nerve Conduction Studies

The dichotomy into axonal and demyelinating neuropathies provides a practical means of correlating electrical abnormalities with major pathophysiologic changes in the nerve. Electrical studies can be of help in localization of an abnormality, and in distinguishing one variety of

neuropathy from another: for example, diffuse vs. multifocal; axonal vs. demyelinating. Such distinction has diagnostic value. Specific classification of nerve injuries into neuropraxia and axonotmesis can be made on the basis of conduction studies and electromyography. Such classification has a bearing on prognosis and treatment.

1. Focal neuropathies or compressive lesions such as carpal tunnel syndrome, ulnar neuropathies or root lesions, for localization.
2. Traumatic nerve lesions, for diagnosis and prognosis.
3. Diagnosis or confirmation of suspected generalized neuropathies, such as diabetic, uremic, metabolic or immune.
4. Repetitive nerve stimulation in diagnosis of neuromuscular junction disorders such as myasthenia gravis, myasthenic syndrome.
5. There may be other instances, not detailed here, where NCS may be of use. Not all possible or potential indications are addressed here.

The broad diagnostic scope of NCS is recognizable by the foregoing description. There may be instances where questions about an indication, or need for a study, will arise. The clinical history and examination, carried out before the study, must always describe and document clearly and comprehensibly the need for the planned test. A "rule-out" diagnosis is typically not acceptable. Noridian is cognizant of the fact that patients are not always referred with a definite diagnosis in mind. Often, pain, paresthesia, or weakness in an extremity is the reason for an NCS or EMG. These common symptoms result not only from axonal and myelin dysfunction but also from systemic, non-neurological illnesses. EMG and NCS may help in making this distinction. Therefore, symptom-based diagnoses such as "pain in limb", "weakness", "disturbance in skin sensation" or "paresthesia" are acceptable, provided the clinical assessment unequivocally supports the need for a study. To cite but one example of many, an EMG or NCS is irrelevant as a first order diagnostic test for limb pain resulting from immediate antecedent trauma or acute bone injury.

Both EMG and NCS are required for a clinical diagnosis of peripheral nervous system disorders. EMG results reflect on the integrity of the functioning connection between a nerve and its innervated muscle and also on the integrity of a muscle itself. Performance of one does not eliminate the need for the other. The intensity and extent of testing with EMG and NCS are matters of clinical judgment developed after the initial pre-test evaluation, and later modified during the testing procedure.

Decisions to continue, modify or conclude a test also rely on a knowledge base of anatomy, physiology and neuromuscular diseases. There is a requirement for ongoing real-time clinical diagnostic evaluation, especially during EMG examination. Also, EMG examination is invasive. Needle placement in the exact muscle of interest is essential. It requires needle exploration near vital structures as the pleura, femoral neurovascular bundle, peritoneum, intraspinal spaces, carotid artery, orbit and brachial plexus. Risk of infection from AIDS, Hepatitis B-E, Creutzfeldt-Jakob encephalopathy, and hemorrhage from anticoagulation can be managed by proper techniques.

The electrodiagnostic evaluation is actually an extension of the neurologic portion of the physical examination. Both require a detailed knowledge of a patient and his/her disease. Training in the performance of electrodiagnostic procedures, in isolation without awareness and ability to diagnose and manage neuromuscular diseases, is not always adequate for electrodiagnostic consultation. Recognition and experience in the management of disparate diseases that produce common electrodiagnostic findings may be necessary. For example, EMG-NCS findings may overlap in the following pairs of disorders: inflammatory myopathies and ALS, ALS and multi-level radiculopathies, myotonia of channelopathies (periodic paralyses) and myotonic dystrophies, focal neuropathies such as Carpal Tunnel Syndrome and proximal plexopathies. Other instances where knowledge of disease behavior is crucial are Chronic Inflammatory Demyelinating Neuropathy (CIDP) and Multifocal Motor Neuropathy. These entities display electrodiagnostic features that resemble generalized polyneuropathies. Neuromuscular transmission disorders require

separation based on clinical presentation and electrical features. Treatment will depend on differentiating among them. Without awareness of the disease spectrum, diagnosis solely by EMG-NCS findings may be wrong, detrimental to the patient or both.

The following definitions are from the American Association of Neuromuscular & Electrodiagnostic Medicine Recommended Policy for Electrodiagnostic Medicine.

"The stimulation of nerves is similar across all NCSs; the characteristics of motor, sensory, and mixed NCSs are different and are discussed separately below. In each case, an appropriate nerve is stimulated and recording is made either from the appropriate nerves or from muscle supplied by the motor nerve.

- a. Motor NCSs are performed by applying electrical stimulation at various points along the course of a motor nerve while recording the electrical response from an appropriate muscle. Response parameters include amplitude, latency, configuration, and motor conduction velocity.
- b. Sensory NCSs are performed by applying electrical stimulation near a nerve and recording the response from a distant site along the nerve. Response parameters include amplitude, latency, and configuration.
- c. Mixed NCSs are performed by applying electrical stimulation near a nerve containing both motor and sensory fibers (a mixed nerve) and recording from a different location along that nerve that also contains both motor and sensory nerve fibers. Response parameters include amplitude, latency, configuration, and motor conduction velocity."

Nerve conduction studies performed independent of needle electromyography (EMG) may only provide a portion of the information needed to diagnose muscle, nerve root, and most nerve disorders. When the nerve conduction study (NCS) is used on its' own without integrating needle EMG findings or when an individual relies solely on a review of NCS data, the results can be misleading, and important diagnoses may be missed.

In most instances, both NCS and usually EMG are necessary to perform diagnostic testing. While a provider may choose to perform just an NCS, when performed alone it is usually considered not medically necessary. The only exception to this is a situation when a provider may consider it appropriate to perform an NCS without doing an EMG for the diagnosis of carpal tunnel syndrome with a high pre-test probability.

B. Electromyography

Neurogenic disorders can be distinguishable from myopathic disorders by a carefully performed EMG. For example, both polymyositis and ALS produce manifest weakness. The former carries a very different prognosis and treatment than the latter. An EMG is valuable in making this distinction. Similarly, classification of nerve trauma into axonal vs. demyelinating categories, with corresponding differences in prognoses, are possible with EMG. Below is a list of common disorders where an EMG, in tandem with properly conducted NCS, will be helpful in diagnosis:

1. Nerve compression syndromes, including carpal tunnel syndrome and other focal compressions.
2. Radiculopathy - cervical, lumbosacral.
3. Mono/polyneuropathy - metabolic, degenerative, hereditary.
4. Myopathy - including poly-and dermatomyositis, myotonic and congenital myopathies.
5. Plexopathy - idiopathic, trauma, infiltration.
6. Neuromuscular junction disorders - myasthenia gravis. Single fiber EMG is of special value here.
7. At times, immediately prior to botulinum toxin injection, for localization.
8. At times, immediately prior to injection of phenol or other substances for nerve blocking or chemodenervation.

There may be other instances, not detailed here, where EMG may be of use.

Use of EMG with Botulinum Toxin Injection

EMG may be used to optimize the anatomic location of botulinum toxin injection. It is expected there will be no more than one study performed per anatomic location of injection, if needed. (Please see the separate LCD "Botulinum Toxin Types A and B.")

Limitations:

Routine testing for polyneuropathy of diabetes or end stage renal disease (ESRD) is not considered medically necessary and is not covered. Testing for the sole purpose of monitoring disease intensity or treatment efficacy in these two conditions is also not covered.

Psychophysical measurements (current, vibration, thermal perceptions), even though they may involve delivery of a stimulus, are considered to be part of the physical exam and may not be billed as a separate service.

Current Perception Threshold/Sensory Nerve Conduction Threshold Test (sNCT) – is not covered by Medicare. *This procedure is different and distinct from assessment of nerve conduction velocity, amplitude and latency. It is also different from short-latency somatosensory evoked potentials.*

Examination using portable hand-held devices, or devices which are incapable of real-time wave-form display and analysis, and incapable of both NCS and EMG testing; will be included in the E/M service. They will not be paid separately. Examples include: The Axon II or delta fiber analysis testing and/or machines with other names.

NCS must provide a number of response parameters in a real-time fashion to facilitate provider interpretation. Those parameters include amplitude, latency, configuration and conduction velocity. Medicare does not accept diagnostic studies that do not provide this information or those that provide delayed interpretation as substitutes for NCS. Raw measurement data obtained and transmitted trans-telephonically or over the Internet, therefore, do not qualify for the payment of the electrodiagnostic service codes included in this LCD.

Medicare does not expect to receive claims for nerve conduction testing accomplished with discriminatory devices that use fixed anatomic templates and computer-generated reports used as an adjunct to physical examination routinely on all patients.

Electromyography

The necessity and reasonableness of the following uses of EMG studies have not been established:

- exclusive testing of intrinsic foot muscles in the diagnosis of proximal lesions
- definitive diagnostic conclusions based on paraspinal EMG in regions bearing scar of past surgeries (e.g., previous laminectomies)
- pattern-setting limited limb muscle examinations, without paraspinal muscle testing for a diagnosis of radiculopathy
- EMG testing shortly after trauma, before EMG abnormalities would have reasonably had time to develop
- surface and macro EMGs
- multiple uses of EMG in the same patient at the same location of the same limb for the purpose of optimizing botulinum toxin injections.

For outpatient settings other than a Comprehensive Outpatient Rehabilitation Facility (CORF), references to "physicians" throughout this policy include non-physicians, such as nurse practitioners, clinical nurse specialists and

physician assistants. Such non-physician practitioners, with certain exceptions, may certify, order and establish the plan of care as authorized by State law. (See Sections 1861[s][2] and 1862[a][14] of Title XVIII of the Social Security Act; 42 CFR, Sections 410.74, 410.75, 410.76 and 419.22; 58 FR 18543, April 7, 2000.) Each practitioner must provide only those services within the scope of practice for each state.

Summary of Evidence

N/A

Analysis of Evidence (Rationale for Determination)

N/A

General Information

Associated Information

Documentation Requirements

The patient's medical records must clearly document the medical necessity for the test. It is not necessary to include documentation with each claim submission. Data gathered during NCS, however, should be available which reflect the actual numbers (latency, amplitude, etc.), preferably in a tabular (not narrative) format. The reason for referral and a clear diagnostic impression are required for each study. In cases where a review becomes necessary, either a hard copy of waveforms or a complete written report with an interpretation of the test must be submitted upon request.

Normal findings and abnormalities uncovered during the study should be documented with the muscles tested, the presence and type of spontaneous activity, as well as the characteristics of the voluntary unit potentials and interpretation.

Sources of Information

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Bibliography

N/A

Revision History Information

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASON(S) FOR CHANGE
12/01/2019	R6	<p>The LCD is revised to remove CPT/HCPCS codes in the Keyword Section of the LCD.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Other (The LCD is revised to remove CPT/HCPCS codes in the Keyword Section of the LCD.)
12/01/2019	R5	<p>As required by CR 10901, all billing and coding information has been moved to the companion article, this article is linked to the LCD.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Revisions Due To Code Removal
10/01/2018	R4	<p>02/22/2019 - At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p> <p>Added S345XXD to list of covered codes. It was inadvertently left out of the coding but was included in LCD editing.</p>	<ul style="list-style-type: none"> Revisions Due To ICD-10-CM Code Changes

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASON(S) FOR CHANGE
10/01/2018	R3	<p>10/16/2018 - At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p> <p>The following ICD-10 codes were added: G51.31, G51.32, G51.33, G71.01, G71.02, G71.09, M79.11, M79.12 and M79.18.</p> <p>The following ICD-10 codes were deleted: G51.3, G71.0, M79.1.</p> <p>The following ICD-10 codes had description changes: M50.01, M50.11, M50.21, M50.31, and M50.81</p> <p>Lists and numbering in the Coverage and Indications section were corrected.</p>	<ul style="list-style-type: none"> • Creation of Uniform LCDs With Other MAC Jurisdiction • Revisions Due To ICD-10-CM Code Changes
10/01/2017	R2	<p>DATE (08/20/2017): At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p> <p>Effective 10/1/2017, LCD is revised per the annual ICD-10-CM code update to:</p> <p>Add ICD-10-CM codes: E11.10, E11.11, G12.23, G12.24, G12.25, M33.03, M33.13, M33.93, M48.061 and M48.062</p> <p>Revise ICD-10-CM codes: M33.01, M33.02, M33.09, M33.11, M33.12 and M33.19</p> <p>Delete ICD-10-CM codes: M48.06</p>	<ul style="list-style-type: none"> • Revisions Due To ICD-10-CM Code Changes
10/01/2016	R1	<p>The following ICD-10 codes are added/deleted effective 10/1/16:</p> <p>Added codes: G56.03, G56.13, G56.23, G56.33, G56.43, G56.83, G56.93, G57.03, G57.13, G57.23, G57.33,</p>	<ul style="list-style-type: none"> • Creation of Uniform LCDs With Other MAC Jurisdiction • Revisions Due To ICD-10-CM Code Changes

REVISION HISTORY DATE	REVISION HISTORY NUMBER	REVISION HISTORY EXPLANATION	REASON(S) FOR CHANGE
		<p>G57.43, G57.53, G57.63, G57.73, G57.83, G57.93, G61.82, M50.021, M50.022, M50.023, M50.121, M50.122, M50.123, M50.221, M50.222, M50.223, M50.321, M50.322, M50.323, M50.821, M50.822, M50.823.</p> <p>Deleted codes: M50.02, M50.12, M50.22, M50.32, M50.82. Revised description codes: S54.8X1A, S54.8X2A.</p> <p>Combined the CPT code groups and the ICD-10 code groups for clarification.</p> <p>Removed multiple sources from the Sources of Information and Basis for Decisions section to be consistent with National Workgroup LCD.</p>	10-CM Code Changes

Associated Documents

Attachments

N/A

Related Local Coverage Documents

Article(s)

A54969 - Billing and Coding: Nerve Conduction Studies and Electromyography

A54990 - Response to Comments: Nerve Conduction Studies and Electromyography

Related National Coverage Documents

N/A

Public Version(s)

Updated on 01/29/2020 with effective dates 12/01/2019 - N/A

Updated on 11/12/2019 with effective dates 12/01/2019 - N/A

Updated on 02/25/2019 with effective dates 10/01/2018 - 11/30/2019

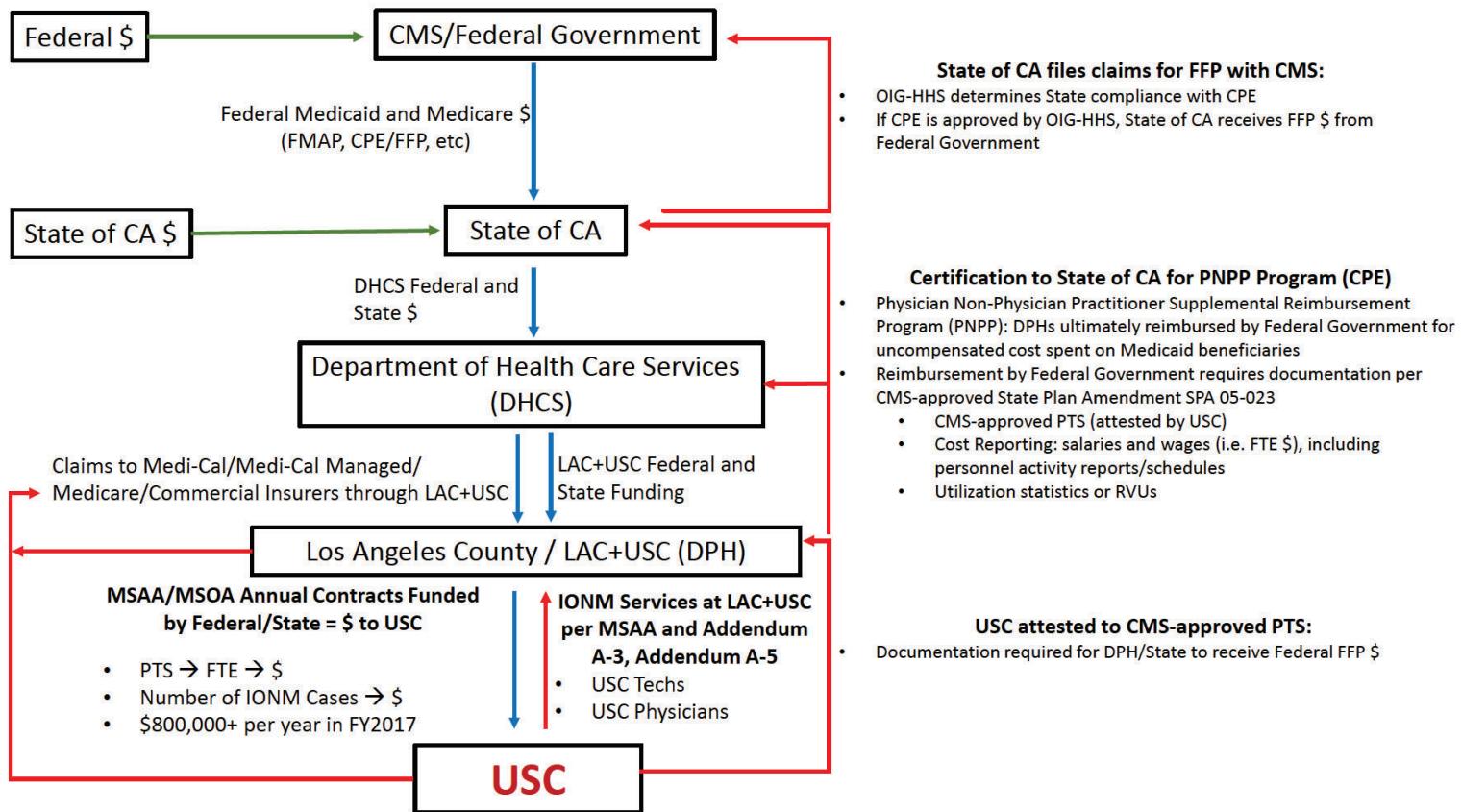
Updated on 10/31/2018 with effective dates 10/01/2018 - N/A

Some older versions have been archived. Please visit the MCD Archive Site to retrieve them.

Keywords

N/A

Exhibit 5



Definitions

- **DPH: Designated Public Hospital**
- **FMAP: Federal Medical Assistance Percentage**
 - CMS reimburses each state for a percentage of its total Medicaid expenses calculated by the FMAP (50% minimum)
- **FFP: Federal Financial Participation**
 - FFP is an after-the-fact reimbursement by the Federal Government for State expenditures under Medicaid.
- **CPE: Certified Public Expenditure**
 - Statutorily recognized Medicaid financing approach by which a governmental entity, including a governmental provider (e.g., county hospital), incurs an expenditure eligible for FFP under the state's approved Medicaid state plan (§1903(w)(6) of the Social Security Act; 42 CFR 433.51).
 - The governmental entity certifies that the funds expended are public funds used to support the full cost of providing the Medicaid-covered service or the Medicaid program administrative activity. Based on this certification, the state then claims FFP.
 - CMS requires documentation of actual costs incurred: Provider Time Study (PTS), Cost Reporting.
- **CA State Planned Amendment (SPA) 05-023:**
 - Approved by CMS December 21, 2007 (and retroactive to July 1, 2005) allows for interim, supplemental payments to DPHs to reimburse them for the uncompensated cost of providing physician and non-physician practitioner professional services to Medicaid inpatient beneficiaries.
 - SPA 05-023 requires time studies to be conducted to account for clinical time for physician and non-physician practitioners utilizing the Medicare approved time study.
- **PNPP: Physician Non-Physician Practitioner Supplemental Reimbursement Program:**
 - PNPP is a CPE which provides supplemental reimbursement to eligible government-operated hospitals or government entities with which they are affiliated, for the uncompensated Medicaid costs of providing physician and non-physician practitioner professional services to Medicaid beneficiaries.

Exhibit 6

Existing Schedule FY18

	Monday	Tuesday	<u>Wednes</u>	Thurs	Friday	Saturday	Sunday
In charge	Parastou	Andres	Justin	Andres	Andres	Parastou	Andres
Call	Parastou	Andres	Parastou	Andres	Andres		

Billing days: Andres 3, Parastou 1, Justin 1

Call: Andres 5, Parastou 4

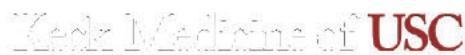
Proposed Schedule FY19 (Justin added)

	Monday	Tuesday	<u>Wednes</u>	Thurs	Friday	Saturday	Sunday
In charge	Justin	Andres	Parastou	TBD	Justin	Parastou	Andres
Call	Justin	Andres	Parastou	Andres	Justin		

Billing days: Justin 2, Andres 1tbd, Parastou 1tbd

Call: Andres 4, Parastou 3, Justin 2

Exhibit 7



USC Neurosciences

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Intraoperative Neurophysiological Monitoring Program

Overview

Our Program

The Surgical Neurophysiology Program at Keck Medicine of USC in Los Angeles is unlike any surgical monitoring program in the country; it provides all aspects of surgical neurophysiology to greatly reduce the risk of damaging key nervous system areas during surgery.

The program consists of three parts: intraoperative monitoring, brain mapping and brain implants.

- Intra-operative monitoring reduces risk and improves outcomes during brain, spine head and neck surgery or

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other surgeries where any part of the nervous system is at risk. By monitoring the electrical signals of nerve cells in the brain and spinal cord during surgery, the program at Keck Medicine of USC in Los Angeles can help prevent injuries like stroke or paralysis during any of these operations.

- Brain mapping localizes important functions of the brain, such as language, motor function, vision and sensation-brain areas that can vary a great deal between individuals. As a consequence, surgeons will know which key areas to bypass when performing operations, sparing vital structures in the brain.
- Brain implants: We use deep brain stimulation for the treatment of conditions like Parkinson disease, essential tremor, dystonia and obsessive-compulsive disorder, among others. By navigating electrodes deep into the brain, we are able to locate the group of neurons that are responsible for some of the patient's symptoms. These devices are then activated in the operating room to determine the potential for adverse effects and to confirm the correct location for surgical implant leading to improvement in symptoms.

Our Approach

Program physicians use a number of methods to measure nerve cell activity in the brain and spinal cord, and nerves during surgery, including evoked potentials, electroencephalograms, electrocorticography and microelectrode recording.

Program physicians work with a wide variety of surgeons, including neurosurgeons, orthopaedic surgeons, otolaryngologists (ear, nose and throat specialists), movement disorder specialists, interventional neuroradiologists and vascular surgeons. The program monitors and assists surgeons at Los Angeles County+USC Medical Center as well as the

reminders

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Center](#)

hospitals at the Keck Medical Center of USC.

As part of a large university-based medical center, program physicians are involved in research projects aimed at improving monitoring, deep brain stimulation and mapping capabilities, as well as testing new surgical techniques to treat a variety of conditions including aneurysms, brain and spinal cord tumors, complex spine conditions, head and neck tumors among others. Physicians at the program also have authored several chapters in the most widely used textbooks on neurophysiological monitoring.

Our Results

Number of patients monitored per year

Keck Medical Center of USC: 1,200

LAC+USC Medical Center: 600

Total: **1,800**

Treatments

Overall physician rating

Intraoperative

Neurophysiological

Monitoring Program Rating

0.0 out of 5

0 Ratings

0 Comments

What are patients saying about us

5  0

0 Ratings  0

0 Ratings  0

0 Ratings  0

0 Ratings  0

0 Ratings of 5 (0 Reviews)

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Comprehensive Epilepsy Center

Headache and Neuralgia Center

Intraoperative Neurophysiological Monitoring Program

Memory and Aging Center

Multiple Sclerosis Comprehensive Care Center

Neuro Critical Care Program

Neuro Oncology Program

Our Team

Physicians

Andres Gonzalez, MD, MMM, FACNS

Parastou Shilian, DO

Neuro Psychology and
Cognitive Behavioral
Neurology Program

Technicians

Christopher Hansen

Aaron Kim

Mirian Mayorga

Julie Blue

Michael Vesely

Neuro Rehabilitation
Program

Neuromuscular Center

Parkinson's Disease
and Movement Disorder
Center

Roxanna Todd Hodges
Comprehensive Stroke
Center and TIA Program

Surgical partners

Vascular Neurosurgery

Steve Gianotta, MD

Jonathan Russin, MD

Acoustic Neuroma

Rick A. Friedman, MD

Steve Gianotta, MD

Brain Tumor

Thomas C. Chen, MD, PhD

Charles Y. Liu, MD, PhD

Gabriel Zada, MD

Deep Brain Stimulation

Daniel M. Togasaki, MD, PhD

Jennifer S. Hui, MD

Mark A. Liker, MD

Facial Reanimation

Jon-Paul Pepper, MD

Interventional Neuroradiology

Arun Amar, MD

William J. Mack, MD

Matthew Tenser, MD

Parotid and Salivary Gland Surgery

John K Niparko, MD

Dennis R. Maceri, MD

Uttam K. Sinha, MD

Niels C. Kokot, MD

Alexander Markarian, MD

Spine Center

Patrick C. Hsieh, MD

John Liu, MD

Mark J. Spoonamore, MD

Jeffrey C. Wang, MD

Thyroid

John K Niparko, MD

Dennis R. Maceri, MD

Uttam K. Sinha, MD

Niels C. Kokot, MD

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Exhibit 8

Department of Neurology Policy for IOM coverage: FY19

Schedule

1. Responsibility for making and maintaining the workday and call schedule for the IOM service has been delegated by the Department chair to the chief of service.
2. The regular workday schedule runs from 8 AM to 8 PM on Monday through Friday. Cases may be monitored remotely.

Assigned days (Monday, Tuesday and Wednesday)/ Primary Billing Physician

3. For Monday, Tuesday and Wednesday (the assigned days) one attending physician (Primary billing physician) will be given the responsibility to monitor all the cases, and pair cases with other physicians (pool physician) for billing purposes.
Primary billing physician schedule
 - i. Monday: Dr Cheongsiatmoy
 - ii. Tuesday: Dr Gonzalez
 - iii. Wednesday: Dr Shilian
 - iv. Thursday and Friday will be distributed by chief of service

Distributed days (Thursday and Friday)

4. For Thursday and Friday (the distributed days), the chief of service will pair cases with attending physicians (pool physicians) either the night before or during the day in case there are changes in the OR schedule.
5. During the distributed days, the on-call physician will likely be given more of the afternoon cases as those cases tend to go into the night.

Night and Weekend Call Schedule

6. The call schedule runs from 8 PM to 8 AM on weekdays and from 8AM to 8AM on weekends and holidays. The on-call physician may monitor cases remotely. Call schedule will be as follows
 - a) Call Schedule
 - i. Monday, Friday: Cheongsiatmoy [2 units]
 - ii. Wednesday, Saturday: Shilian [3 units]
 - iii. Tuesday, Thursday, Sunday: Gonzalez [4 units]

Academic Days

7. Academic days currently are Mondays for Dr Gonzalez and Dr Shilian. Due to the fact two attending physicians will be out on Mondays, an additional physician Dr Vahe Akopian will be available remotely to help cover cases on Mondays.
8. For FY19, Dr Chui/Dr Gonzalez approved Wednesday afternoon for Dr Cheongsiatmoy (beginning at 2pm).
9. No academic days are to be taken on Tuesdays or Fridays because of neurology and neurosurgery ground rounds.
10. There is no accumulation or “banking” on academic days.

General Considerations, Vacation and Sick days

11. We expect all physicians to be physically present every workday at USC health science campus. Exceptions include sick, vacation, academic day, or certain exceptions (e.g no cases scheduled, or the physician is assigned by the chief of service to work remotely).

Exhibit 9

Cheongsiatmoy, Justin

From: Garner, Judy
Sent: Wednesday, July 18, 2018 8:43 PM
To: Cheongsiatmoy, Justin; Chui, Helena
Subject: RE: Follow-up re: IOM Division Policies

Dear Justin,

I appreciated your taking time to talk with Dr. Chui and myself as well. It was interesting to hear about how IOM is performed.

In your division, you have described a complicated situation, with a lot of moving parts. I know that Dr. Chui and I will work together to look into the issues you have raised. I know that she wishes to be fair in how the work is assigned.

In terms of the distribution of academic days within a department, (below you alluded to my lack of understanding why you wouldn't get a full day), please understand that I do not have detailed experience in the department or practice. Many of the decisions about whether or not someone may take an academic day or not are determined by the finances of the department as well as other academic needs. It is the chair's responsibility and authority to make clinical assignments, teaching assignments, and to allow academic days, travel to meetings and participation in CME. I am happy to help Dr. Chui in this effort, as she needs.

Dr. Chui is going to be out of town until August 10, I believe, and I will be at a meeting in Canada next week myself. We will be working on this, but the vacation schedule might delay things a little bit. I do appreciate your patience, and your confidence in us that we will be able to resolve these issues. I know that we both absolutely appreciate your dedication to the patient's welfare and your willingness to support the practice next week while you will be alone. Please let us know if you need us to bring in assistance for you during this period.

Thank you
Judy

*Judy A. Garner, Ph.D.
Vice Dean for Faculty Affairs
Keck School of Medicine of USC
KAM 422
1975 Zonal Ave.
Los Angeles, CA
323-442-1619*

Exhibit 10

Cheongsiatmoy, Justin

From: Angelique Matthews <[REDACTED]>
Sent: Wednesday, June 07, 2017 10:55 AM
To: Cheongsiatmoy, Justin; Gonzalez, Andres; Shilian, Parastou; Akopian, Vahe
Subject: Metrics for May 2017 Keck and LAC
Attachments: Metrics for May 2017.docx

Metrics for May 2017

Keck

Number of cases	112
Cases that start after 14:30	22 or 20%
Cases that last after 14:30	52 or 50%
Cases that start after 15:30	13 or 12%
Cases that last after 15:30	46 or 41%
Average case time	3.54
Cases done by techs	98 or 88%
Cases done by vendors (including modern/ no modern)	11/3 or 10%/3%

LAC

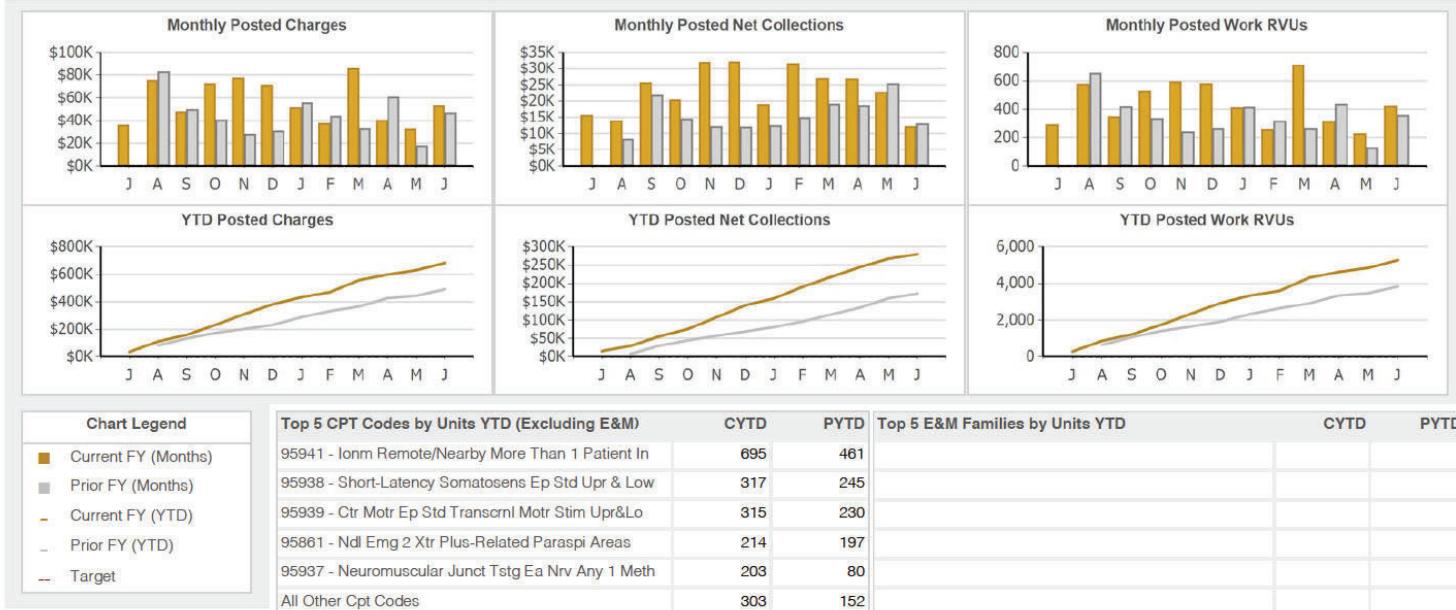
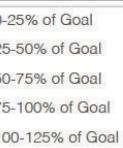
Number of cases	56
Cases that start after 14:30	4 or 7%
Cases that last after 14:30	19 or 34%
Cases that start after 15:30	0
Cases that last after 15:30	13 or 23%
Average case time	4.0
Cases done by techs	49 or 88%
Cases done by vendors	7 or 12%

Exhibit 11

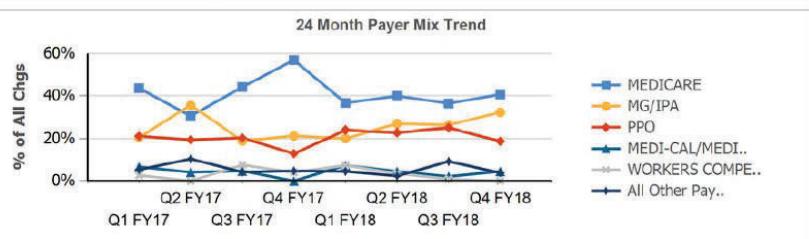
USC Care Provider Key Activity Indicators by Posting Date

Management Analytic Reporting System

	Jun 2018	Jun 2017	QΔ	% Δ	CYTD	PYTD	QΔ YTD	% Δ YTD	YTD Target	YTD Target Status
Charge Amount	\$53,305	\$47,085	\$6,220	13.2 %	\$683,580	\$491,675	\$191,905	39.0 %	N/A	0-25% of Goal
Net Collections	\$12,108	\$13,012	(\$904)	-6.9 %	\$279,986	\$172,651	\$107,335	62.2 %	N/A	25-50% of Goal
Chg Lag < 15 Days	9.7 %	48.1 %	-38.3 %	-79.7 %	24.2 %	51.9 %	-27.7 %	-53.5 %	80 %	50-75% of Goal
Work RVUs	422.2	361.3	60.8	16.8 %	5,277.9	3,838.5	1,439.4	37.5 %	N/A	75-100% of Goal



Top 5 Payer Categories by Charges - YTD through Jun 2018				
Payer Category	CYTD	% Tot	PYTD	% Tot
MEDICARE	\$262,410	38.4%	\$218,620	44.5%
MG/IPA	\$178,455	26.1%	\$114,750	23.3%
PPO	\$156,540	22.9%	\$90,945	18.5%
MEDI-CAL/MEDICAID	\$31,295	4.6%	\$19,385	3.9%
WORKERS COMPENSATION	\$21,310	3.1%	\$18,810	3.8%
All Other Payers	\$33,570	4.9%	\$29,165	5.9%



Selected Month: Jun 2018

Provider: CHEONGSIATMOY MD,JUSTIN

Page 1 of 6

[For a description of this report, go to: https://mars.usc.edu/support/pars](https://mars.usc.edu/support/pars)

AAMC Specialty:

Dept: NEUROLOGY (5)

Patient Name	MRN	Service Dt	Procedure	Primary Diagnosis	Site	M1	M2	Units	Charge	wRVU
		3/26/2018	G0453 - Cont Intraop Neuro Monitor	M48.02 - Spinal Stenosis, Cervical Region-M4	UNH			49	\$4,410	30.8
		6/6/2018	G0453 - Cont Intraop Neuro Monitor	M48.04 - Spinal Stenosis, Thoracic Region-M4	UNH			42	\$3,780	26.4
		4/10/2018	G0453 - Cont Intraop Neuro Monitor	G54.3 - Thoracic Root Disorders, Not Elsewhere Specified	UNH			27	\$2,430	16.9
		5/7/2018	G0453 - Cont Intraop Neuro Monitor	I71.6 - Thoracoabdominal Aortic Aneurysm, Without Hypertension	UNH			22	\$1,980	13.8
		6/13/2018	G0453 - Cont Intraop Neuro Monitor	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH			20	\$1,800	12.6
		5/18/2018	G0453 - Cont Intraop Neuro Monitor	D33.3 - Benign Neoplasm Of Cranial Nerves-Other	UNH			16	\$1,440	10.0
		5/17/2018	G0453 - Cont Intraop Neuro Monitor	M48.02 - Spinal Stenosis, Cervical Region-M4	UNH			16	\$1,440	10.0
		5/1/2018	95941 - Iомн Remote/Nearby More Than 1	I60.01 - Ntrm Subarach Hemor From Right	UNH			8	\$1,400	17.7
		5/10/2018	G0453 - Cont Intraop Neuro Monitor	M54.16 - Radiculopathy, Lumbar Region-	UNH			15	\$1,350	9.4
		4/6/2018	G0453 - Cont Intraop Neuro Monitor	M54.12 - Radiculopathy, Cervical Region-M54	UNH			10	\$900	6.3
		5/16/2018	95941 - Iомн Remote/Nearby More Than 1	M48.061 - Spinal Stenosis, Lumbar Region With Hypertension	UNH			5	\$875	11.0
		5/9/2018	95941 - Iомн Remote/Nearby More Than 1	D49.2 - Neoplasm Of Unsp Behavior Of Bone, Not Elsewhere Specified	UNH			5	\$875	11.0
		4/25/2018	G0453 - Cont Intraop Neuro Monitor	G93.9 - Disorder Of Brain, Unspecified-G93.9	GFMC			8	\$720	5.0
		2/2/2018	G0453 - Cont Intraop Neuro Monitor	C07 - Malignant Neoplasm Of Parotid Gland	UNH			8	\$720	5.0
		6/13/2018	95941 - Iомн Remote/Nearby More Than 1	D32.0 - Benign Neoplasm Of Cerebral	UNH			4	\$700	8.8
		5/16/2018	95941 - Iомн Remote/Nearby More Than 1	M48.02 - Spinal Stenosis, Cervical Region-M4	UNH			4	\$700	8.8
		5/15/2018	95941 - Iомн Remote/Nearby More Than 1	G93.9 - Disorder Of Brain, Unspecified-G93.9	GFMC			4	\$700	8.8
		5/30/2018	G0453 - Cont Intraop Neuro Monitor	D42.0 - Neoplasm Of Uncertain Behavior Of Cervical	UNH			7	\$630	4.4
		6/13/2018	95941 - Iомн Remote/Nearby More Than 1	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH			3	\$525	6.6
		5/16/2018	95941 - Iомн Remote/Nearby More Than 1	M48.061 - Spinal Stenosis, Lumbar Region With Hypertension	UNH			3	\$525	6.6
		5/11/2018	95941 - Iомн Remote/Nearby More Than 1	G93.9 - Disorder Of Brain, Unspecified-G93.9	UNH			3	\$525	6.6
		5/10/2018	95941 - Iомн Remote/Nearby More Than 1	D44.7 - Neoplasm Of Uncrt Behav Of Aortic	UNH			3	\$525	6.6
		5/8/2018	95941 - Iомн Remote/Nearby More Than 1	E05.00 - Thyrotoxicosis With Diffuse Goiter W/O	UNH			3	\$525	6.6
		4/27/2018	95941 - Iомн Remote/Nearby More Than 1	G93.5 - Compression Of Brain-G93.5	UNH			3	\$525	6.6
		4/26/2018	95941 - Iомн Remote/Nearby More Than 1	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH			3	\$525	6.6
		4/26/2018	95941 - Iомн Remote/Nearby More Than 1	E05.00 - Thyrotoxicosis With Diffuse Goiter W/O	UNH			3	\$525	6.6
		4/25/2018	95941 - Iомн Remote/Nearby More Than 1	G93.9 - Disorder Of Brain, Unspecified-G93.9	GFMC			3	\$525	6.6
		5/18/2018	G0453 - Cont Intraop Neuro Monitor	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH			5	\$450	3.1
		3/30/2018	95941 - Iомн Remote/Nearby More Than 1	G93.9 - Disorder Of Brain, Unspecified-G93.9	GFMC			2	\$350	4.4
		2/1/2018	95941 - Iомн Remote/Nearby More Than 1	C79.31 - Secondary Malignant Neoplasm Of	UNH			2	\$350	4.4
		6/13/2018	95861 - Ndl Emg 2 Xtr Plus-Related Paraspine A	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH	26		1	\$300	1.6
		6/13/2018	95861 - Ndl Emg 2 Xtr Plus-Related Paraspine A	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH	26		1	\$300	1.6
		6/6/2018	95861 - Ndl Emg 2 Xtr Plus-Related Paraspine A	M48.04 - Spinal Stenosis, Thoracic Region-M4	UNH	26		1	\$300	1.6
		5/18/2018	95861 - Ndl Emg 2 Xtr Plus-Related Paraspine A	G54.4 - Lumbosacral Root Disorders, Not Elsewhere Specified	UNH	26		1	\$300	1.6
		5/17/2018	95861 - Ndl Emg 2 Xtr Plus-Related Paraspine A	M48.02 - Spinal Stenosis, Cervical Region-M4	UNH	26		1	\$300	1.6

Selected Month: Jun 2018

Page 2 of 6

AAMC Specialty:

Provider: CHEONGSIATMOY MD,JUSTIN

[For a description of this report, go to: https://mars.usc.edu/support/pars](https://mars.usc.edu/support/pars)

Dept: NEUROLOGY (5)

Patient Name	MRN	Service Dt	Procedure	Primary Diagnosis		Site	M1	M2	Units	Charge	wRVU
██████████	██████	5/17/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M48 061	Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$300	1 6
██████████	██████	5/16/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M48 02	Spinal Stenosis Cervical Region M4	UNH	26		1	\$300	1 6
██████████	██████	5/16/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M48 061	Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$300	1 6
██████████	██████	5/16/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M48 061	Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$300	1 6
██████████	██████	5/10/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M54 16	Radiculopathy Lumbar Region	UNH	26		1	\$300	1 6
██████████	██████	5/9/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	D49 2	Neoplasm Of Unsp Behavior Of Bone	UNH	26		1	\$300	1 6
██████████	██████	4/27/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	G93 5	Compression Of Brain G93 5	UNH	26		1	\$300	1 6
██████████	██████	4/26/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	G54 4	Lumbosacral Root Disorders Not Else	UNH	26		1	\$300	1 6
██████████	██████	4/10/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	G54 3	Thoracic Root Disorders Not Elsewhe	UNH	26		1	\$300	1 6
██████████	██████	4/6/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M54 12	Radiculopathy Cervical Region M54	UNH	26		1	\$300	1 6
██████████	██████	3/26/2018	95861 Ndl Emg 2 Xtr Plus Related Parasp A	M48 02	Spinal Stenosis Cervical Region M4	UNH	26		1	\$300	1 6
██████████	██████	11/1/2017	95861 Ndl Emg 2 Xtr Plus Related Parasp A	C79 49	Secondary Malignant Neoplasm Of	GFMC	26		1	\$300	1 6
██████████	██████	6/13/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	D32 0	Benign Neoplasm Of Cerebral	UNH	26		1	\$260	2 4
██████████	██████	6/13/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G54 4	Lumbosacral Root Disorders Not Else	UNH	26		1	\$260	2 4
██████████	██████	6/13/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G54 4	Lumbosacral Root Disorders Not Else	UNH	26		1	\$260	2 4
██████████	██████	6/6/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 04	Spinal Stenosis Thoracic Region M4	UNH	26		1	\$260	2 4
██████████	██████	5/30/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	D42 0	Neoplasm Of Uncertain Behavior Of Ce	UNH	26		1	\$260	2 4
██████████	██████	5/18/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G54 4	Lumbosacral Root Disorders Not Else	UNH	26		1	\$260	2 4
██████████	██████	5/17/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 02	Spinal Stenosis Cervical Region M4	UNH	26		1	\$260	2 4
██████████	██████	5/17/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 061	Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$260	2 4
██████████	██████	5/16/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 02	Spinal Stenosis Cervical Region M4	UNH	26		1	\$260	2 4
██████████	██████	5/16/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 061	Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$260	2 4
██████████	██████	5/15/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 9	Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$260	2 4
██████████	██████	5/11/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 9	Disorder Of Brain Unspecified G93 9	UNH	26		1	\$260	2 4
██████████	██████	5/10/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	D44 7	Neoplasm Of Unct Behav Of Aortic Bo	UNH	26		1	\$260	2 4
██████████	██████	5/10/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M54 16	Radiculopathy Lumbar Region	UNH	26		1	\$260	2 4
██████████	██████	5/9/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	D49 2	Neoplasm Of Unsp Behavior Of Bone	UNH	26		1	\$260	2 4
██████████	██████	5/7/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	71 6	Thoracoabdominal Aortic Aneurysm Wi	UNH	26		1	\$260	2 4
██████████	██████	5/1/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	60 01	Ntrm Subarach Hemor From Right	UNH	26		1	\$260	2 4
██████████	██████	4/27/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 5	Compression Of Brain G93 5	UNH	26		1	\$260	2 4
██████████	██████	4/26/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G54 4	Lumbosacral Root Disorders Not Else	UNH	26		1	\$260	2 4
██████████	██████	4/25/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 9	Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$260	2 4
██████████	██████	4/25/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 9	Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$260	2 4
██████████	██████	4/10/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G54 3	Thoracic Root Disorders Not Elsewhe	UNH	26		1	\$260	2 4

Selected Month: Jun 2018

Page 3 of 6

AAMC Specialty:

Provider: CHEONGS ATMOTY MD JUST N

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Dept: NEUROLOGY (5)

Patient Name	MRN	Service Dt	Procedure	Primary Diagnosis	Site	M1	M2	Units	Charge	wRVU
██████████	██████	4/6/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M54 12 Radiculopathy Cervical Region M54	UNH	26		1	\$260	2 4
██████████	██████	3/30/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$260	2 4
██████████	██████	3/26/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	M48 02 Spinal Stenosis Cervical Region M4	UNH	26		1	\$260	2 4
██████████	██████	2/1/2018	95939 Ctr Motr Ep Std Transcnl Motr Stim	C79 31 Secondary Malignant Neoplasm Of	UNH	26		1	\$260	2 4
██████████	██████	6/13/2018	95822 Eeg Rec Coma Sleep Only	D32 0 Benign Neoplasm Of Cerebral	UNH	26		1	\$230	1 1
██████████	██████	5/30/2018	95822 Eeg Rec Coma Sleep Only	D42 0 Neoplasm Of Uncertain Behavior Of Ce	UNH	26		1	\$230	1 1
██████████	██████	5/15/2018	95822 Eeg Rec Coma Sleep Only	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$230	1 1
██████████	██████	5/11/2018	95822 Eeg Rec Coma Sleep Only	G93 9 Disorder Of Brain Unspecified G93 9	UNH	26		1	\$230	1 1
██████████	██████	5/10/2018	95822 Eeg Rec Coma Sleep Only	D44 7 Neoplasm Of Uncrt Behav Of Aortic Bo	UNH	26		1	\$230	1 1
██████████	██████	5/8/2018	95868 Ndl Emg Crnl Nrv Supplied Musc Bi	E05 00 Thyrotoxicosis W Diffuse Goiter W/O	UNH	26		1	\$230	1 2
██████████	██████	5/7/2018	95822 Eeg Rec Coma Sleep Only	71 6 Thoracoabdominal Aortic Aneurysm Wi	UNH	26		1	\$230	1 1
██████████	██████	5/1/2018	95822 Eeg Rec Coma Sleep Only	60 01 Ntrm Subarach Hemor From Right	UNH	26		1	\$230	1 1
██████████	██████	4/26/2018	95868 Ndl Emg Crnl Nrv Supplied Musc Bi	E05 00 Thyrotoxicosis W Diffuse Goiter W/O	UNH	26		1	\$230	1 2
██████████	██████	3/30/2018	95822 Eeg Rec Coma Sleep Only	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$230	1 1
██████████	██████	6/13/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G54 4 Lumbosacral Root Disorders Not Else	UNH	26		1	\$220	0 7
██████████	██████	6/6/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 04 Spinal Stenosis Thoracic Region M4	UNH	26		1	\$220	0 7
██████████	██████	5/18/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G54 4 Lumbosacral Root Disorders Not Else	UNH	26		1	\$220	0 7
██████████	██████	5/17/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 02 Spinal Stenosis Cervical Region M4	UNH	26		1	\$220	0 7
██████████	██████	5/17/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 061 Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$220	0 7
██████████	██████	5/16/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 02 Spinal Stenosis Cervical Region M4	UNH	26		1	\$220	0 7
██████████	██████	5/16/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 061 Spinal Stenosis Lumbar Region Wit	UNH	26		1	\$220	0 7
██████████	██████	5/15/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$220	0 7
██████████	██████	5/10/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M54 16 Radiculopathy Lumbar Region	UNH	26		1	\$220	0 7
██████████	██████	5/9/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	D49 2 Neoplasm Of Unsp Behavior Of Bone	UNH	26		1	\$220	0 7
██████████	██████	4/27/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G93 5 Compression Of Brain G93 5	UNH	26		1	\$220	0 7
██████████	██████	4/26/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G54 4 Lumbosacral Root Disorders Not Else	UNH	26		1	\$220	0 7
██████████	██████	4/25/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$220	0 7
██████████	██████	4/25/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$220	0 7
██████████	██████	4/10/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G54 3 Thoracic Root Disorders Not Elsewhe	UNH	26		1	\$220	0 7
██████████	██████	4/6/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M54 12 Radiculopathy Cervical Region M54	UNH	26		1	\$220	0 7
██████████	██████	3/30/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	G93 9 Disorder Of Brain Unspecified G93 9	GFMC	26		1	\$220	0 7
██████████	██████	3/26/2018	95937 Neuromuscular Junct Tstg Ea Nrv Any	M48 02 Spinal Stenosis Cervical Region M4	UNH	26		1	\$220	0 7
██████████	██████	11/1/2017	95937 Neuromuscular Junct Tstg Ea Nrv Any	C79 49 Secondary Malignant Neoplasm Of	GFMC	26		1	\$220	0 7
██████████	██████	5/18/2018	95867 Ndl Emg Crnl Nrv Supplied Musc Uni	D33 3 Benign Neoplasm Of Cranial Nerves	UNH	26		1	\$150	0 8
██████████	██████	6/13/2018	95938 Short Latency Somatosens Ep Std Upr	D32 0 Benign Neoplasm Of Cerebral	UNH	26		1	\$100	0 9

Selected Month: Jun 2018

Page 4 of 6

AAMC Specialty:

Provider: CHEONGS ATMOTY MD JUST N

[For a description of this report, go to: https://mars.usc.edu/support/pqr](https://mars.usc.edu/support/pqr)

Dept: NEUROLOGY (5)

Patient Name	MRN	Service Dt	Procedure	Primary Diagnosis			Site	M1	M2	Units	Charge	wRVU	
XXXXXX	XXXXXX	6/13/2018	95938 Short Latency Somatosens Ep Std Upr	G54 4	Lumbosacral Root Disorders	Not Else	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	6/13/2018	95938 Short Latency Somatosens Ep Std Upr	G54 4	Lumbosacral Root Disorders	Not Else	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	6/6/2018	95938 Short Latency Somatosens Ep Std Upr	M48 04	Spinal Stenosis	Thoracic Region M4	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/30/2018	95938 Short Latency Somatosens Ep Std Upr	D42 0	Neoplasm Of Uncertain Behavior Of Ce	Unk	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/18/2018	95938 Short Latency Somatosens Ep Std Upr	G54 4	Lumbosacral Root Disorders	Not Else	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/17/2018	95938 Short Latency Somatosens Ep Std Upr	M48 02	Spinal Stenosis	Cervical Region M4	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/17/2018	95938 Short Latency Somatosens Ep Std Upr	M48 061	Spinal Stenosis	Lumbar Region Wit	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/16/2018	95938 Short Latency Somatosens Ep Std Upr	M48 02	Spinal Stenosis	Cervical Region M4	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/16/2018	95938 Short Latency Somatosens Ep Std Upr	M48 061	Spinal Stenosis	Lumbar Region Wit	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/16/2018	95938 Short Latency Somatosens Ep Std Upr	M48 061	Spinal Stenosis	Lumbar Region Wit	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/15/2018	95938 Short Latency Somatosens Ep Std Upr	G93 9	Disorder Of Brain	Unspecified G93 9	GFMC	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/11/2018	95938 Short Latency Somatosens Ep Std Upr	G93 9	Disorder Of Brain	Unspecified G93 9	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/10/2018	95938 Short Latency Somatosens Ep Std Upr	D44 7	Neoplasm Of Uncrt Behav Of Aortic Bo	Unk	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/10/2018	95938 Short Latency Somatosens Ep Std Upr	M54 16	Radiculopathy	Lumbar Region	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/9/2018	95938 Short Latency Somatosens Ep Std Upr	D49 2	Neoplasm Of Unsp Behavior Of Bone	Unk	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/7/2018	95938 Short Latency Somatosens Ep Std Upr	71 6	Thoracoabdominal Aortic Aneurysm	Wi	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	5/1/2018	95938 Short Latency Somatosens Ep Std Upr	60 01	Ntrm Subarach Hemor	From Right	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/27/2018	95938 Short Latency Somatosens Ep Std Upr	G93 5	Compression Of Brain	G93 5	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/26/2018	95938 Short Latency Somatosens Ep Std Upr	G54 4	Lumbosacral Root Disorders	Not Else	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/25/2018	95938 Short Latency Somatosens Ep Std Upr	G93 9	Disorder Of Brain	Unspecified G93 9	GFMC	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/25/2018	95938 Short Latency Somatosens Ep Std Upr	G93 9	Disorder Of Brain	Unspecified G93 9	GFMC	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/10/2018	95938 Short Latency Somatosens Ep Std Upr	G54 3	Thoracic Root Disorders	Not Elsewhe	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	4/6/2018	95938 Short Latency Somatosens Ep Std Upr	M54 12	Radiculopathy	Cervical Region M54	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	3/30/2018	95938 Short Latency Somatosens Ep Std Upr	G93 9	Disorder Of Brain	Unspecified G93 9	GFMC	26		1	\$100	0 9	
XXXXXX	XXXXXX	3/26/2018	95938 Short Latency Somatosens Ep Std Upr	M48 02	Spinal Stenosis	Cervical Region M4	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	2/1/2018	95938 Short Latency Somatosens Ep Std Upr	C79 31	Secondary Malignant Neoplasm	Of	UNH	26		1	\$100	0 9	
XXXXXX	XXXXXX	2/2/2018	95867 Ndl Emg Crnl Nrv Supplied Musc Uni	C07	Malignant Neoplasm	Of Parotid Gland	UNH	26		0	\$0	0 0	
XXXXXX	XXXXXX	11/1/2017	95938 Short Latency Somatosens Ep Std Upr	C41 2	Malignant Neoplasm	Of Vertebral Colu	GFMC	26		0	\$0	0 0	
XXXXXX	XXXXXX	11/1/2017	95939 Ctr Motr Ep Std Transcnl Motr Stim	C41 2	Malignant Neoplasm	Of Vertebral Colu	GFMC	26		0	\$0	0 0	
XXXXXX	XXXXXX	11/1/2017	G0453 Cont Intraop Neuro Monitor	C41 2	Malignant Neoplasm	Of Vertebral Colu	GFMC			0	\$0	0 0	
XXXXXX	XXXXXX	11/1/2017	95937 Neuromuscular Junct Tstg Ea Nrv Any	C41 2	Malignant Neoplasm	Of Vertebral Colu	GFMC	26		1	(\$220)	(0 7)	
XXXXXX	XXXXXX	11/1/2017	95861 Ndl Emg 2 Xtr Plus Related Parasp A	C41 2	Malignant Neoplasm	Of Vertebral Colu	GFMC	26		1	(\$300)	(1 6)	
XXXXXX	XXXXXX	2/2/2018	95941 onm Remote/Nearby More Than 1	C07	Malignant Neoplasm	Of Parotid Gland	UNH			2	(\$350)	(4 4)	
Total											403	\$53 305	422 2

Selected Month: Jun 2018

Page 5 of 6

AAMC Specialty:

Provider: CHEONGS ATMOTY MD JUST N

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Dept: NEUROLOGY (5)

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Selected Month: Jun 2018

Provider: CHEONGS ATMOY MD JUST N

Page 6 of 6

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AAMC Specialty:

Dept: NEUROLOGY (5)

Exhibit 12